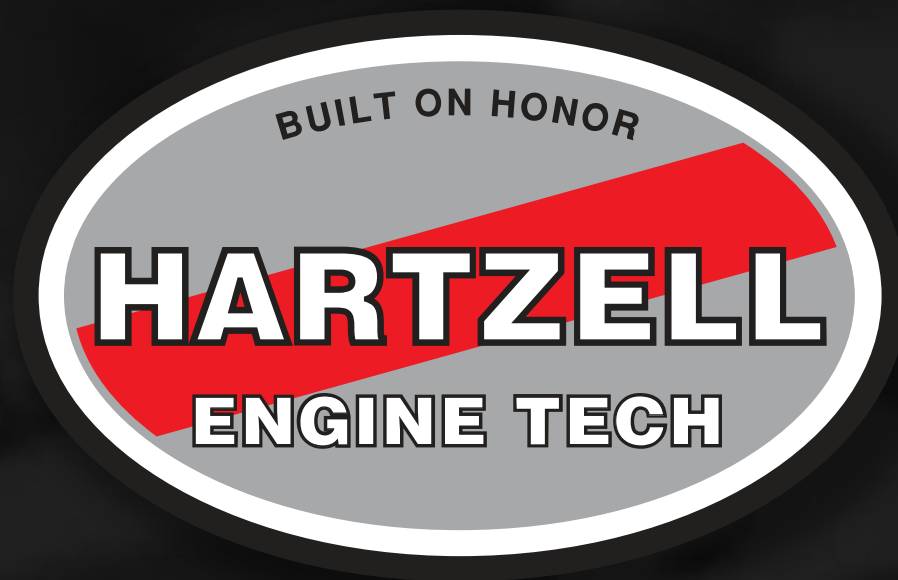




POWERUP MAGNETOS

A Technologically Enhanced Magneto



POWERUP Ignition Systems

AIRCRAFT IGNITION SYSTEMS

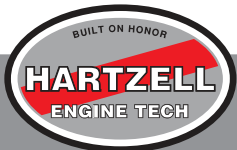
- Detail components in service for over a Decade!
 - Complete assembly PMA'd in 2021
- NOT subject to ANY of the competition's S.B.'s
- Proven Direct Replacement(s) for existing offerings
 - Magnetos
 - Ignition harnesses



POWERUP Magnetos

- PMA's are Not transferable - Not a Rubber Stamp!
 - Full Analysis and Resubmittal to the FAA was required
 - Analyzed baseline product to address failure modes
 - Legacy Product A.D.'s and S.D.R.'s all addressed
 - Mfg. Processes, vendors, and drawing revised
 - CAR/SCAR activity completed

Not a simple Rebranding Effort of an acquired product



Plane
Power

Fuelcraft

AEROFORCE

Janitrol Aero

Sky-Tec

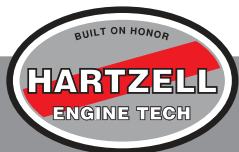
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BUILT ON HONOR

PRODUCT IMPROVEMENTS



Versus the competition



BUILT ON HONOR

Improved Impulse Coupling

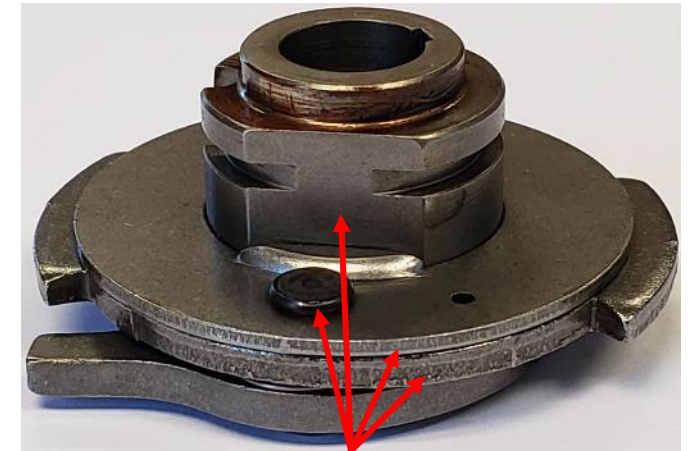


- Single-piece impulse coupling hub design, **NO RIVETS**
- Improved durability & manufacturability



The Others:

- 5-piece hub with special process to manufacture
- Subject to tolerance stack up
- SB & AD activity associated with this design



Improved Capacitor



- Internally grounded lead for improved durability
- Square insulator & stud base less prone to rotation during nut torqueing



The Others:

- External ground joint prone to failure
- D-shaped stud base & insulator has lower contact area, susceptible to twisting during nut torqueing



Improved Coil

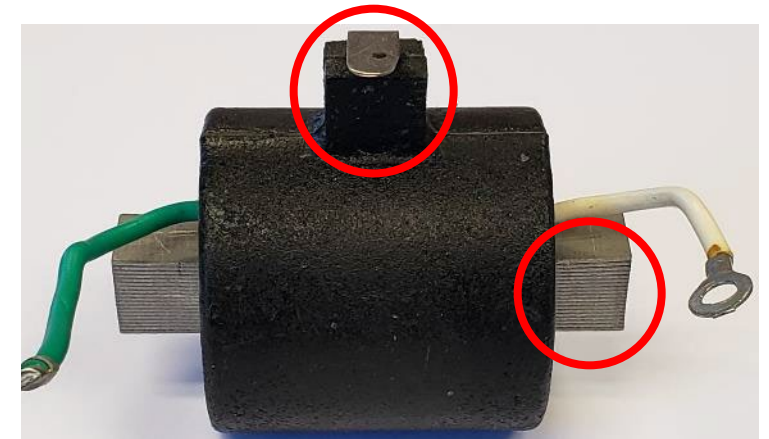


- More support material around tab
- Thick top & bottom lamination plates resists deformation during assembly
- Higher spark = more energy!



The Others:

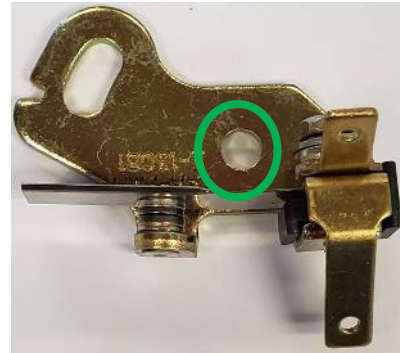
- All thin lamination stack
- Voids in potting material
- Poor field service reputation



Improved Breaker Assembly



- Clamp-up force applied to metal frame
- Improved spring eliminates point bounce
- Reduced point drift over service life



The Others:

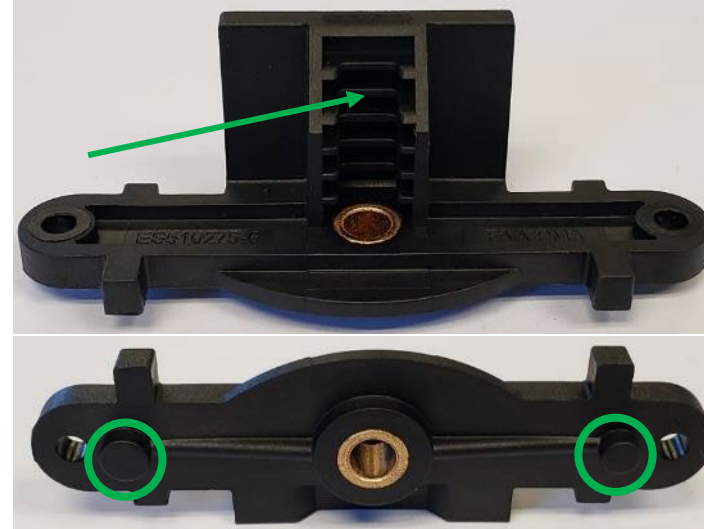
- Clamp-up force applied through plastic body resulting in creep-induced loss of force
- Higher point drift over service life



Improved Block Assembly

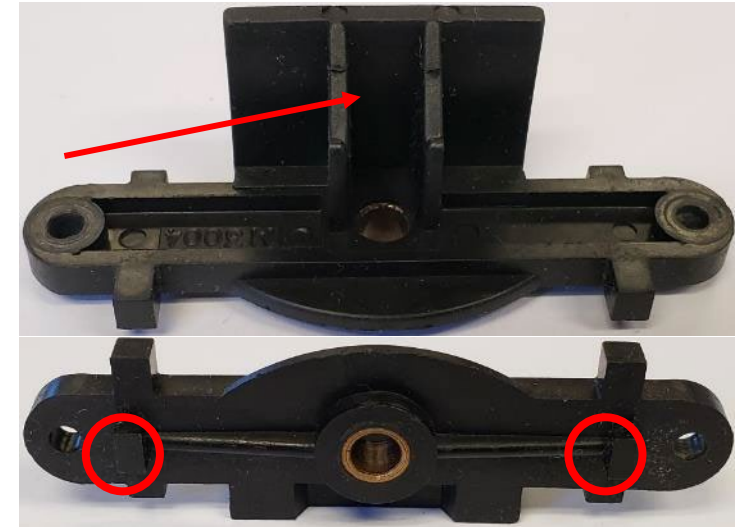


- Arc suppression ribs added to bridge in high tension carbon brush zone reduces miss-firing
- Geometric asymmetry prevents incorrect installation



The Others:

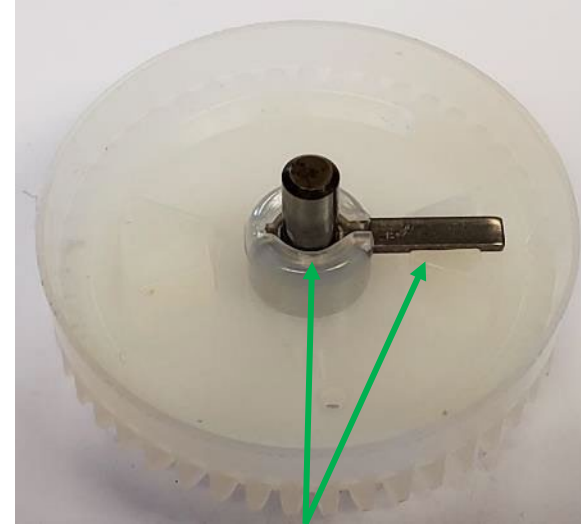
- No arc suppression features
- Mirror design allows for incorrect installation



Improved Distributor Gear

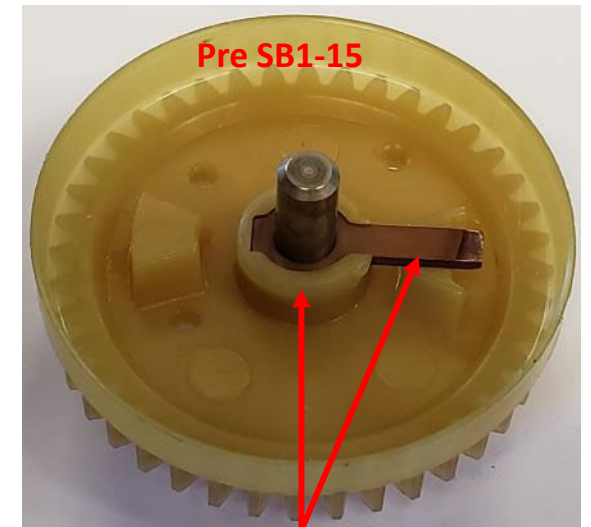


- Distributor gear electrode made from Monel for superior arc erosion resistance
- Electrode heat staked to shaft and hub for mechanical stability



The Others:

- Subject to SB1-15A due to electrode separation issue
- Copied POWERUP design after SB1-15A (circa late 2018)



Designed in Product Improvements

- POWERUP magneto improvements Summarized
 - Impulse Coupling
 - Capacitor
 - Coil
 - Breaker
 - Block assembly
 - Distributor gear



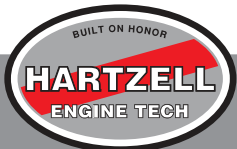
Important Note - “Legacy Product” S.B.’s do **NOT** apply

Three (3) Options Summarized

- NEW POWERUP PMA Magneto Series
 - 100% New POWERUP Part Content
 - Identifiable by the “ES” prefix
- HP POWERUP Magneto Series
 - Think “Reman” Standards
 - 3 Non-Wear Parts inspected to NEW part limits
 - 2 Piece Frame/Housing & Rotor
 - All other parts replaced 100% with NEW POWERUP components
 - Impulse Coupling, Coil, Block, Capacitor, Breaker & Gear
 - Identifiable by the “HP” suffix
- Overhauled Magnetos via QAA
 - All wear components replaced with POWERUP parts only
 - Other parts inspected ICW Overhaul Manual and replaced on condition with POWERUP parts only



Important Note - “Legacy Product” S.B.’s do **NOT** apply

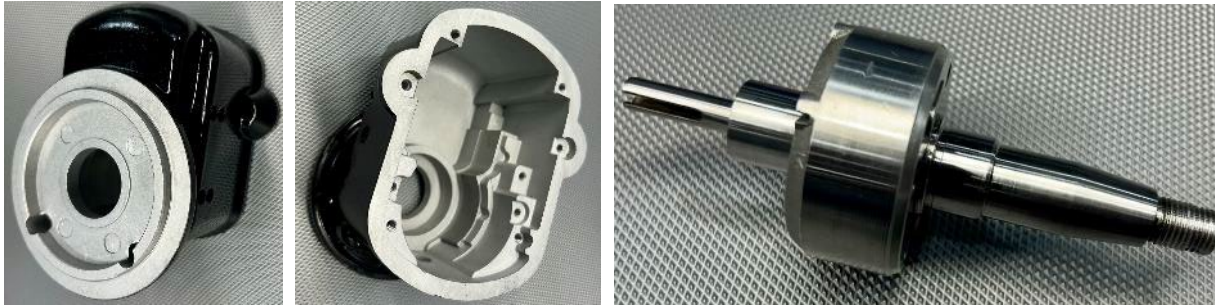


BUILT ON HONOR

HP Series Summarized

“Reman” Standards Applied to POWERUP “HP” Product Line

- 3 Non-Wear Parts inspected to NEW part limits
 - 2 Piece Frame/Housing + Rotor



- All other parts replaced 100% with NEW POWERUP components
 - Impulse Coupling, Coil, Block, Capacitor, Breaker & Gear
- Identifiable by the “HP” suffix

Important Note - “Legacy Product” S.B.’s do **NOT** apply



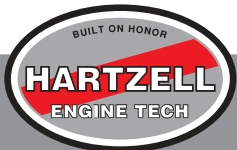
POWERUP Detail Parts

- Magneto detail parts available for purchase
 - 500-hour kits
 - Impulse couplings
 - Block
 - Gear
 - Coil
 - Other
- 500-hour inspection and repair as well as customer property overhaul provided by Quality Aircraft Accessories



POWERUP Magneto Product Line - Summary

- A better magneto....by design
 - Real component improvements
 - Not a Kelly Aero rebranding event
- The brand equity and support of Hartzell Aviation
- The ability to compete on Price with improved Quality
- Condition optionality - Choose your work scope or price/value point



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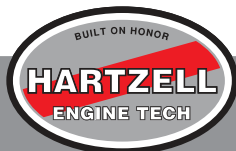
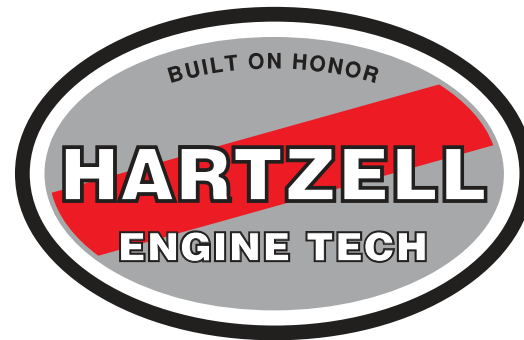
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BUILT ON HONOR

BUILT ON HONOR

HARTZELL

AVIATION



Plane
Power

Fuelcraft

AEROFORCE

Janitrol Aero

Sky-Tec

POWERUP
AIRCRAFT IGNITION SYSTEMS

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